

## DETAILED ACTION

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Thomas Champagne on 9/16/2008.

The application has been amended as follows:

**Claim 1(Amended):** Method for processing of a three-dimensional image data set, wherein

(a) The three-dimensional image data set is converted to at least two different data representations for image reproduction;

(b) the at least two different data representations are reproduced;

(c) one image section that is shown in one of the data representations is markable;

(d) for the at least one other data representation the relative position of the marked image section is calculated;

(e) the relative position of the marked image section is shown in the at least one other data representation;

wherein the at least one data representation is a sectional view and the at least one other data representation is a three-dimensional view;

wherein the at least one sectional view comprises an axial view ~~[and/or]~~ and a frontal view ~~[and/or]~~ and a sagittal view ~~[and/or]~~ and an oblique view;

wherein the at least one three-dimensional view comprises a wall view ~~[and/or]~~ and an intraluminal view;

wherein the three-dimensional image data set of a hose-shaped body is processed; and

wherein the at least one of the data representations is a wall view with a line of sight that is parallel ~~[and/or]~~ or anti-parallel to the curvature vector at the maximum curvature of the mid-line of the hose- shaped body.

**Claim 4(Amended):** Method of claim 1, wherein the at least one of the data representations is a topogram view.

**Claim 6(Amended):** Method according to claim [4] 5 wherein the shown image section is marked manually ~~[and/or]~~ or by means of a structure ~~[and/or]~~ or a texture recognizing method.

**Claim 11(Amended):** An image processing and reproducing system according to claim 10 for performing a method according to claim 1, comprising

at least one device for image reproduction of a three-dimensional image data set by at least two different data representations;

a device for marking one image section that is shown in one of the data representations; and

a device for calculation of the relative position of the image section marked in the one data representation for the at least one other data representation;

including a computer readable medium embodied with a computer program  
~~[product to be read by or to be implemented in a computer~~  
~~respectively and]~~ that is adapted to perform the steps (a) and (d).

**Claim 12 (cancelled)**

**Claim 13 (cancelled)**

**Claim 14 (cancelled)**

**Claim 15 (cancelled)**

**Claim 16(Amended):** Method according to claim 4, wherein the three-dimensional image data set of a hose-shaped body is processed; and at least one of the data representations is a wall view with a line of sight that is parallel ~~[and/or]~~ or anti-parallel to the curvature vector at the maximum curvature of the mid-line of the hose-shaped body.

**Claim 17(Amended):** Method according to claim 5, wherein the three-dimensional image data set of a hose-shaped body is processed; and at least one of the data representations is a wall view with a line of sight that is parallel ~~[and/or]~~ or anti-parallel to the curvature vector at the maximum curvature of the mid-line of the hose-shaped body.

**Claim 18 (cancelled)**

**Claim 19 (cancelled)**

**Claim 20 (cancelled)**

***Allowable Subject Matter***

2. Claims **1, 4-6, 8-11, 16-17** are allowed (now renumbered 1-10).

The following is an examiner's statement of reasons for allowance: After reviewing the remarks made by the Applicant in response to the non-final office action the Examiner finds the remarks to be persuasive. The most pertinent prior art is Johnson et al (US 5,891,030) and Zhang et al (The Curvature-vector pair and its application in displaying Ct colon data, 2002 SPIE). Johnson et al discloses in FIG. 4 a workstation display showing a preferred software interface that includes first three images on the upper row are axial 50, coronal 52, and sagittal 54 cross sections, respectively. Corresponding rendered scouts axial 56, coronal 58, and sagittal 60, are shown just below each of these views. The image 62 in the upper right portion of the display is an enlarged off axis cross section centered over the end of a delineated midline. Below this image is a low resolution rendered view 64 looking further into the colon. The elongated pictures at the bottom of the display 66, 68 are images of the straightened colon showing the entire length of the delineated colon. At the bottom of the display, a graphical user interface (GUI) control panel 70 allows a user to adjust the window and level settings. A pop-up window, not shown in FIG. 4, is used to access a tool kit of automatic tracing tools and similar options. Other windows, such as a parameter adjustment window, shown in FIG. 8, are used to adjust other settings and parameters within the system. Zhang et al discloses a process of generating sample points and setting up correspondence between points on the colon surface and pixels in a 2D array (figure 1) where a curvature of the colon surface is being extracted and analyzed by constructing curves in four directions at each surface point, calculated curvatures, selected the maximum and minimum curvature, and performed thresholding

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to obtain candidate locations for potential polyps (page 219, lines 1-6). Moreover, Zhang et al teaches the curvature vectors with respect to the colon lumen assessed and those curvatures that point into the lumen are set to zero. See page 216, penultimate paragraph. The curves constructed for the two-dimensional display are constructed in four directions at each surface point. See the last full paragraph of page 219. Neither Johnson et al nor Zhang et al discloses the relative position of the marked image section is shown in the at least one other data representation; wherein the at least one of the data representations is a wall view with a line of sight that is parallel [~~and/or~~] or anti-parallel to the curvature vector at the maximum curvature of the mid-line of the hose- shaped body.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NANCY BITAR whose telephone number is (571)270-1041. The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nancy Bitar

9/16/2008

/Samir A. Ahmed/  
Supervisory Patent Examiner, Art Unit 2624